

REMARKS

In the Office action, the drawings were objected to as to claim 3; and claims 1-6 and 8 were rejected as being unpatentable over Kreidel '149 under 35 U.S.C. §103(a).

The objections to the drawings have been obviated by cancellation of claim 3.

As to substantive matters, in rejecting claim 1 in view of Kreidel, the Office action asserts that the two vertical hidden lines of Fig. 4 represent a first cylindrical surface. Applicants respectfully disagree and request reconsideration. It will be noted from Figs. 1, 2 and/or 3 that the sealing elements 1 and 2 have a significant arcuate recess at the front end that forms the cutting edge 4. This arcuate recess appears to extend past the cutting edge, when viewed in the longitudinal cross-sections of Figs. 1, 2 and 3. The dashed lines of Fig. 4 therefore appear to be showing the radially inner cutting edge 4 and the radially inner portion of the arcuate recess, which explains why the gap between the two vertical hidden lines is so narrow. There is nothing in the drawings or description that Applicants have been able to discern teach or suggest a cylindrical portion. If anything the hidden vertical lines and the other figures of the '149 reference taken as a whole teach away from the concept of a first cylindrical wall portion as presently claimed. The reference specifically states that the cutting edge 4 cuts and bites into the pipe (col. 2, lines 65-70) without mention of a cylindrical portion. From Figs. 1, 2 and 3, the interior wall portion that is axially adjacent the front edge is most definitely not cylindrical but tapered.

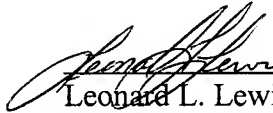
As to claim 2, the claim has been amended to more distinctly point out that after pull-up a rearward portion of the second cylindrical portion is radially spaced from the tube end. This change clarifies the claimed condition after pull-up for either a rear ferrule or a front ferrule. Front ferrules in two ferrule fittings have a tapered camming mouth at the back end of the ferrule that receives the nose or front portion of the back ferrule. This tapered camming mouth of course cannot contact the tube end, and is not the portion being claimed. It is the rearward portion of the second cylindrical portion that is being claimed as being radially spaced after pull-up of the fitting, not the tapered camming surface at the back end of the front ferrule. In the Kreidel reference, the cylindrical portion at the back end of the rear element 2, for example, clearly contacts the pipe after pull-up. For the front element 1, the cylindrical portion that is

roughly in the middle of the element (see Fig. 2 of Kreidel) contacts the pipe after pull-up. Claim 4 is thus patentable from the above analysis as it is specifically directed to a back ferrule of a two ferrule tube fitting. Claims 5, 6 and 8 are patentable for at least the same reasons as claim 1. Applicants further traverse the statement in the Office action that it is obvious to case harden the Kreidel sealing elements 1, 2. Case hardening significantly changes the way a ferrule plastically deforms. There is no basis on which to conclude that the Kreidel elements 1, 2 would still work as intended if they were case hardened, nor is there any basis to conclude that Kreidel would harden more than the cutting edge or front portion, or not use other hardening techniques such as work hardening.

The present application is deemed to be in proper condition for allowance and favorable action is respectfully requested.

Respectfully submitted,

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